

**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Takashi KUBOTA et al.

Appln. No.: New U.S. National Phase

Filed: Concurrently herewith

Attorney Dkt. No.: 108384-00032

For: MANUFACTURING METHOD FOR COMPOSITE MATERIAL AND  
COMPOSITE MATERIAL OBTAINED THEREBY

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

November 9, 2001

Sir:

Prior to initial examination of the application, please amend the above-identified application as follows:

**IN THE CLAIMS:**

Please amend claims 3-8 as follows:

3. (Amended) A manufacturing method for a composite material in which a bulk body manufactured by the method according to claim 1 and a raw material for base material comprising a metal or a nonmetal or a compound thereof constituting the base material are melted, mixed, and formed by casting, by which the concentration of dispersion material is controlled.

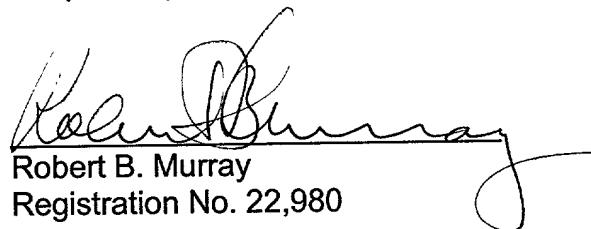
4. (Amended) A manufacturing method for a composite material in which a composite material manufactured by the method according to claim 1 is rolled or heat-treated, by which the crystal structure is controlled.

5. (Amended) The manufacturing method for a composite material according to claim 1, characterized in that a raw material is evaporated by a sputtering method.
6. (Amended) The manufacturing method for a composite material according to claim 1, characterized in that the evaporated particles are deposited while the substrate is rotated.
7. (Amended) The manufacturing method for a composite material according to claim 1, characterized in that the substrate has the same material as those of the base material.
8. (Amended) A composite material manufactured by the method according to claim 1.

**REMARKS**

Claims 1-9 are pending in this application. By this Amendment, claims 3-8 are amended to delete the multiple dependency thereof and to place this application into better condition for examination. No new matter is added.

Respectfully submitted,

  
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CLAIMS

1. A manufacturing method for a composite material in which  
a metal or a nonmetal or a compound thereof is used as a base  
5 material, and at least one kind of metals or nonmetals or  
compounds thereof different from the base material is  
dispersed as a dispersion material, characterized in that  
a raw material for base material comprising a metal or  
a nonmetal or a compound thereof constituting the base  
10 material and at least one raw material for dispersion material  
comprising metals or nonmetals or compounds thereof  
constituting the dispersion material are evaporated  
simultaneously or alternately, and the evaporated particles  
are deposited on a substrate to form a bulk body.
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2. A manufacturing method for a composite material in which  
a metal or a nonmetal or a compound thereof is used as a base  
material, and at least one kind of metals or nonmetals or  
compounds thereof different from the base material is  
20 dispersed as a dispersion material, characterized in that  
a raw material for evaporation comprising a metal or a  
nonmetal or a compound thereof constituting the base material  
or a metal or a nonmetal or a compound thereof constituting  
the dispersion material is evaporated in an atmosphere of any  
25 one of hydrocarbon gas, oxygen gas, and nitrogen gas, and the  
evaporated particles are deposited on a substrate to form a  
bulk body.

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REF ID: A6572
3. A manufacturing method for a composite material in which a bulk body manufactured by the method according to claim 1 [or 2] and a raw material for base material comprising a metal or a nonmetal or a compound thereof constituting the base material are melted, mixed, and formed by casting, by which the concentration of dispersion material is controlled.
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4. A manufacturing method for a composite material in which a composite material manufactured by the method according to [any one of] claims 1 [to 3] is rolled or heat-treated, by which the crystal structure is controlled.
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5. The manufacturing method for a composite material according to [any one of] claims 1 [to 4], characterized in that a raw material is evaporated by a sputtering method.
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6. The manufacturing method for a composite material according to [any one of] claims 1 [to 5], characterized in that the evaporated particles are deposited while the substrate is rotated.
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7. The manufacturing method for a composite material according to [any one of] claims 1 [to 6], characterized in that the substrate has the same material as those of the base material.
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8. A composite material manufactured by the method according to [any one of] claims 1 [to 7].

9. The composite material according to claim 8,  
characterized in that the base material is aluminum and the  
dispersion material is carbon.

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